FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
857014	March 1976	BE	
878430	March 1976	BE	
1030873	February 1974	CA	
2816942	October 1978	DE	
7304320	October 1973	NL	
2023420	January 1980	GB	

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Mukkur., Am. J. Vet. Res. 39(8):1269 (1978).
Literature Search, Apr. 13, 1978.
Literature Search, Jan. 25, 1980.

ART-UNIT: 127

PRIMARY-EXAMINER: Hazel; Blondel

ATTY-AGENT-FIRM: Lentz; Edward T. Williams; Jance E. Lourie; Alan D.

ABSTRACT:

The chemical modification of virulent Pasteurella multocida and Pasteurella haemolytica strains and preparation of live bacteria vaccines from the modified organisms for immunization of bovine, porcine and ovine animal species are disclosed.

9 Claims, 0 Drawing figures

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L4: Entry 57 of 80 File: USPT Dec 2, 1986

US-PAT-NO: 4626430
DOCUMENT-IDENTIFIER: US 4626430 A

TITLE: Processes for growth of modified Pasteurella haemolytica bacteria and preparation of a vaccine therefrom

DATE-ISSUED: December 2, 1986

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kucera; Carrell J.	Lincoln	NE		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Norden Laboratories, Inc.	Lincoln	NE			02

APPL-NO: 06/ 511418 [PALM]
DATE FILED: January 19, 1983

PARENT-CASE:
This is a division of application Ser. No. 255,145, filed Apr. 17, 1981, now U.S. Pat. No. 4,388,299.

INT-CL: [03] A61K 39/102, C12P 21/00, C12N 1/20

US-CL-ISSUED: 424/92; 424/93, 435/68, 435/253
US-CL-CURRENT: 424/255.1; 424/823, 424/824, 424/825, 435/443, 435/71.2, 435/822

FIELD-OF-SEARCH: 424/92, 424/88, 424/93, 435/68, 435/172, 435/253

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	3501770	March 1970	Gale et al.	424/89
☐	3526696	January 1970	Gale et al.	424/89
☐	3634587	January 1972	Ament et al.	424/89
☐	3855408	December 1974	Maheswaran	424/92
☐	4167560	September 1979	Wohler	424/92
☐	4169886	October 1979	Hertman	424/92
☐	4171354	October 1979	Smith	424/92

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L4: Entry 6 of 80 File: USPT Jan 30, 2001

US-PAT-NO: 6180112
DOCUMENT-IDENTIFIER: US 6180112 B1

TITLE: Pasteurella haemolytica vaccine

DATE-ISSUED: January 30, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Highlander; Sarah K.	Houston	TX		
Fedorova; Natalie D.	Houston	TX		

US-CL-CURRENT: 424/255.1; 424/200.1, 424/234.1, 424/235.1, 424/236.1, 435/252.3, 435/69.1, 536/23.7, 536/24.1

CLAIMS:

What is claimed is:

1. A whole cell vaccine composition comprising a therapeutically effective amount of recombinant Pasteurella haemolytica organism comprising an inactivated lktC gene, wherein said recombinant Pasteurella haemolytica organism expresses inactive leukotoxin, wherein and said inactive leukotoxin comprises proleukotoxin.

2. The vaccine composition of claim 1, further comprising a diluent.

3. The vaccine of claim 2, further comprising one or more compounds selected from the group consisting of excipients and adjuvants.

4. The vaccine composition of claim 1, wherein said recombinant Pasteurella haemolytica comprises an lktC::cat operon fusion.

5. The vaccine composition of claim 1, wherein said expression of inactive leukotoxin is stably maintained.

6. The vaccine composition of claim 1, wherein said recombinant Pasteurella haemolytica contains an activator for expression of said inactive leukotoxin.

7. The vaccine composition of claim 6, wherein said activator is AlxA.

8. The vaccine composition of claim 1, wherein said recombinant Pasteurella haemolytica further comprises a strong leukotoxin promoter.

9. A whole cell composition comprising recombinant Pasteurella haemolytica organism comprising an inactivated lktC gene, wherein said recombinant Pasteurella haemolytica organism expresses inactive leukotoxin, and wherein said inactive leukotoxin comprises proleukotoxin.

10. The composition of claim 9, further comprising a diluent.

11. The composition of claim 10, further comprising one or more compounds selected from the group consisting of excipients and adjuvants.

12. The composition of claim 9, wherein said recombinant Pasteurella haemolytica comprises an lktC::cat operon fusion.

13. The composition of claim 9, wherein said expression of inactive leukotoxin is stably maintained.

14. The composition of claim 9, wherein said recombinant Pasteurella haemolytica contains an activator for expression of said inactive leukotoxin.

15. The composition of claim 14, wherein said activator is AlxA.

16. The composition of claim 9, wherein said recombinant Pasteurella haemolytica further comprises a strong leukotoxin promoter.

WEST

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L4: Entry 6 of 80 File: USPT Jan 30, 2001

US-PAT-NO: 6180112
DOCUMENT-IDENTIFIER: US 6180112 B1

TITLE: Pasteurella haemolytica vaccine

DATE-ISSUED: January 30, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Highlander; Sarah K.	Houston	TX		
Fedorova; Natalie D.	Houston	TX		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Balyor College of Medicine	Houston	TX			02

APPL-NO: 09/ 298367 [PALM]
DATE FILED: April 22, 1999

PARENT-CASE:
This is a continuation of application(s) Ser. No. 08/834,455 filed on Apr. 15, 1997, now abandoned.

INT-CL: [07] A61 K 39/102

US-CL-ISSUED: 424/255.1; 424/234.1, 424/236.1, 424/235.1, 424/200.1, 435/69.1, 435/172.1, 435/252.3, 536/23.7, 536/24.1
US-CL-CURRENT: 424/255.1; 424/200.1, 424/234.1, 424/235.1, 424/236.1, 435/252.3, 435/69.1, 536/23.7, 536/24.1

FIELD-OF-SEARCH: 424/234.1, 424/255.1, 424/257.1, 424/236.1, 424/200.1, 424/235.1, 536/23.7, 536/24.1, 435/320.1, 435/69.1, 435/243, 435/252.3, 435/69.3, 435/71.1, 435/172.1, 435/172.3, 530/350

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	3328352	June 1967	Kwolek	
☐	4167560	September 1979	Wohler, Jr.	424/92
☐	4171354	October 1979	Smith	424/92
☐	4328210	May 1982	Kucera	424/92
☐	4336074	June 1982	Dinkelacker	134/8
☐	4683195	July 1987	Mullis et al.	435/6
☐	4683202	July 1987	Mullis	435/91
☐	4955317	September 1990	Kinoshita et al.	118/689
☐	4957739	September 1990	Berget et al.	424/92
☐	5028423	July 1991	Prickett	424/85.8
☐	5055400	October 1991	Lo et al.	435/69.1
☐	5336491	August 1994	Berget et al.	424/190.1
☐	5476657	December 1995	Potter	424/184.1

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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
91/06653	May 1991	WO	

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ART-UNIT: 165

PRIMARY-EXAMINER: Graser; Jennifer

ATTY-AGENT-FIRM: Medlen & Carroll, LLP

ABSTRACT:

The present invention is directed to compositions and methods for the production for the prevention of disease due to P. haemolytica. In particular, the present invention provides P. haemolytica strains that produce inactive leukotoxin for vaccine and other uses. The present invention also provides compositions and methods for genetic manipulations in P. haemolytica.

16 Claims, 20 Drawing figures

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Confer et al. Am J. Vet Res 46: 342-347, 1985.*
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Purdy, Charles W., et al., "Pasteurella haemolytica ultra-violet irradiated vaccine compared by parenteral and aerosol routes in the goat model", Abstracts of Papers, Presented at the 73rd Annual Meeting of the Conference of Research Workers In Animal Diseases, Nov. 9-10, 1992, p. 43.
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ART-UNIT: 165

PRIMARY-EXAMINER: Smith; Lynette R. F.

ASSISTANT-EXAMINER: Portner; Ginny Allen

ATTY-AGENT-FIRM: Silverstein; M. Howard Deck; Randall E. Fado; John D.

ABSTRACT:

A novel vaccine for immunizing animals against Pasteurella haemolytica infection is disclosed. The vaccine is composed of whole killed cells of P. haemolytica in a dosage effective to immunize an animal against the organism, in combination with a pharmaceutically acceptable carrier. The killed cells of P. haemolytica are produced by irradiating viable cells with ultraviolet light for a sufficient period of time to kill the cells.

18 Claims, 16 Drawing figures

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L4: Entry 5 of 80 File: USPT Oct 16, 2001

US-PAT-NO: 6303130
DOCUMENT-IDENTIFIER: US 6303130 B1

TITLE: Pasteurella haemolytica vaccine inactivated by ultraviolet light

DATE-ISSUED: October 16, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Purdy; Charles W.	Amarillo	TX		
Straus; David C.	Lubbock	TX		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
The United States of America as represented by the Secretary of Agriculture	Washington	DC			06

APPL-NO: 08/ 151580 [PALM]
DATE FILED: November 2, 1993

INT-CL: [07] A61 K 39/102

US-CL-ISSUED: 424/255.1; 424/184.1
US-CL-CURRENT: 424/255.1; 424/184.1

FIELD-OF-SEARCH: 424/88, 424/92, 424/184.1, 424/255.1, 424/184

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	2421382	June 1947	Levinson et al.	424/78
☐	4058599	November 1977	Bauer	424/92

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
30775	December 1985	DE	
8606312	December 1985	WO	

OTHER PUBLICATIONS

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5256415

L4: Entry 45 of 80 File: USPT Oct 26, 1993

US-PAT-NO: 5256415
DOCUMENT-IDENTIFIER: US 5256415 A
**** See image for Certificate of Correction ****

TITLE: Vaccine against bovine respiratory disease (pasteurellosis)

DATE-ISSUED: October 26, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Corstvet; Richard E.	Baton Rouge	LA		
Enright; Fred M.	Baton Rouge	LA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Louisiana State University	Baton Rouge	LA			02

APPL-NO: 07/ 919706 [PALM]
DATE FILED: July 24, 1992

PARENT-CASE:
This is a continuation of copending application Ser. No. 07/325,866 filed on Mar. 20, 1989, now abandoned.

INT-CL: [05] A61K 39/02, C12N 1/36

US-CL-ISSUED: 424/92; 424/88, 424/93R, 424/93D, 435/243, 435/245
US-CL-CURRENT: 424/255.1; 424/823, 435/243, 435/245

FIELD-OF-SEARCH: 424/92, 424/88, 424/93R, 424/93D, 435/243, 435/245

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4346074	August 1982	Gilmour et al.	424/92
☐	4957739	September 1990	Berger et al.	424/92

OTHER PUBLICATIONS

Squire et al, Infection and Immunity, vol. 45, No. 3, pp. 667-673, 1984.

ART-UNIT: 185

PRIMARY-EXAMINER: Wityshyn; Michael G.

ASSISTANT-EXAMINER: Mohamed; Abdel A.

ATTY-AGENT-FIRM: Kiesel; William David Tucker; Robert C. Delaune; Warner J.

ABSTRACT:

A vaccine against bovine respiratory disease is provided containing an attenuated strain of Pasteurella haemolytica isolated from an asymptomatic calf. The vaccine effectively triggers an immunological system response to whole cell, denuded, cytotoxin and capsular antigens.

6 Claims, 9 Drawing figures

WEST

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L2	424/255.1/ccls.	0	L2
L1	pasteurella adj haemolytica	273	L1

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L4: Entry 10 of 80 File: USPT May 9, 2000

US-PAT-NO: 6060058
DOCUMENT-IDENTIFIER: US 6060058 A

TITLE: Vaccine for conferring bacterial immunity containing lactoferrin receptor protein

DATE-ISSUED: May 9, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schryvers; Anthony B.	Calgary			CA

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
University Technologies International, Inc.	Calgary			CA	03

APPL-NO: 08/ 483881 [PALM]
DATE FILED: June 7, 1995

PARENT-CASE:
This application is a continuation of application Ser. No. 08/207,719, filed Mar. 9, 1994 now abandoned, which is a continuation of application Ser. No. 07/851,005, filed Mar. 12, 1992 now abandoned, which is a divisional of application Ser. No. 07/639,365, filed Jan. 10, 1991 (now U.S. Pat. No. 5,141,743); which is a continuation of application Ser. No. 07/344,356, filed Apr. 27, 1989 (now abandoned).

INT-CL: [07] A61 K 39/00, A61 K 39/102, A61 K 39/02, A61 K 39/38

US-CL-ISSUED: 424/184.1; 424/249.1, 424/250.1, 424/251.1, 424/255.1, 424/256.1, 424/234.1, 424/236.1, 424/185.1, 530/350
US-CL-CURRENT: 424/184.1; 424/185.1, 424/234.1, 424/236.1, 424/249.1, 424/250.1, 424/251.1, 424/255.1, 424/256.1, 530/350

FIELD-OF-SEARCH: 424/184.1, 424/185.1, 424/249.1, 424/255.1, 424/256.1, 424/234.1, 530/350

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5141743	August 1992	Schryvers	
☐	5922841	July 1999	Loomore et al.	

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Lee, B. C. et al., Molecular Microbiology 2(6):827-829 (1988), "Specificity of the lactoferrin and transferrin receptors in Neisseria gonorrhea".
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Amalea Roosi Compos et al. 1992, Vaccine 10:512-518.
Danve et al. 1993, Vaccine 11:1214-1220.
A.B. Schryvers et al. (May 1988) Infection and Immunity, 56(5): 1144-1149. "Identification and Characterization of the Human Lactoferrin-Binding Protein from Neisseria meningitidis."

ART-UNIT: 165

PRIMARY-EXAMINER: Minnifield; Nita

ATTY-AGENT-FIRM: Burns, Doane, Swecker & Mathis, L.L.P.

ABSTRACT:

A vaccine which provides protective immunity against a bacterial pathogen containing a purified lactoferrin receptor protein is provided.

20 Claims, 1 Drawing figures

WEST

Generate Collection | Print

L4: Entry 20 of 80 File: USPT Aug 3, 1999

US-PAT-NO: 5932705
DOCUMENT-IDENTIFIER: US 5932705 A
**** See image for Certificate of Correction ****

TITLE: Methods and compositions for the treatment and diagnosis of shipping fever

DATE-ISSUED: August 3, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Berget; Peter	Pittsburgh	PA		
Engler; Michael	Houston	TX		
Highlander; Sarah	Houston	TX		
Weinstock; George	Houston	TX		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Board of Regents, University of Texas Systrem					02

APPL-NO: 08/ 286690 [PALM]
DATE FILED: August 5, 1994

PARENT-CASE:
The present application is a divisional of U.S. Ser. No. 07/899,100 filed Jun. 15, 1992 (now U.S. Pat. No. 5,336,491), which was a continuation of U.S. Ser. No. 07/540,261 filed Jun. 18, 1990 (now abandoned), which was a divisional of U.S. Ser. No. 07/085,430 filed Aug. 13, 1987 (now U.S. Pat. No. 4,957,739), which was a continuation of U.S. Ser. No. 06/935,806 filed Nov. 28, 1986 (now abandoned).

INT-CL: [06] A23 J 1/00, A61 K 39/00, A61 K 39/102

US-CL-ISSUED: 530/413; 424/190.1, 424/255.1, 435/69.1, 435/69.3, 435/71.1, 435/71.2, 530/344, 530/350, 530/387.9, 530/388.4, 530/389.5
US-CL-CURRENT: 530/413; 424/190.1, 424/255.1, 435/69.1, 435/69.3, 435/71.1, 435/71.2, 530/344, 530/350, 530/387.9, 530/388.4, 530/389.5

FIELD-OF-SEARCH: 424/255.1, 424/190.1, 530/350, 530/344, 530/387.9, 530/388.4, 530/389.5, 530/413, 435/69.1, 435/69.3, 435/71.1, 435/71.2

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4328210	May 1982	Kucera	424/92
☐	4335106	June 1982	Kucera	424/92
☐	4388299	June 1983	Kucera	424/92
☐	4506017	March 1985	Kucera	424/93
☐	4559306	December 1985	Kucera	424/92
☐	4626430	December 1986	Kucera	424/92
☐	5055400	October 1991	Lo et al.	435/69.1
☐	5165924	November 1992	Shewen et al.	424/88

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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
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ART-UNIT: 161

PRIMARY-EXAMINER: Housel; James C.

ASSISTANT-EXAMINER: Shaver; Jennifer

ATTY-AGENT-FIRM: Arnold, White and Durkee

ABSTRACT:

Novel compositions are disclosed for use in the treatment or diagnosis of bovine pasteurellosis, commonly referred to as Shipping Fever. Cell-free Pasteurella haemolytica supernatants are employed to provide individual antigen compositions, identified through reaction with sera from naturally-infected or convalescent cattle. In particular, at least seven individual P. haemolytica antigen groups were recognized in cell-free culture supernatants. Purified P. haemolytica supernatant, formulated in a suitable pharmaceutical vaccine composition is shown to elicit a specific immune response, in both cows and rabbits, directed against the individual immunoreactive P. haemolytica polypeptides identified. Also disclosed are novel recombinant cells, plasmids and bacteriophage which include transcriptionally active P. haemolytica antigen genes. Recombinant clones are similarly selected to be reactive with naturally-infected antisera. Examples, and further disclosure, are also provided which demonstrate the utility of a presently disclosed antibody and antigen compositions in immuno-detection of both antigens and antibodies in various biological samples.

13 Claims, 22 Drawing figures

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L4: Entry 22 of 80 File: USPT Mar 23, 1999

US-PAT-NO: 5885589
DOCUMENT-IDENTIFIER: US 5885589 A
**** See image for Certificate of Correction ****

TITLE: Pasteurella vaccine

DATE-ISSUED: March 23, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Foged; Niels T.ae butted.kker	Frederiksberg			DK
Petersen; Svend	Lyngby			DK

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Intervet International B.V.	Boxmeer			NL	03

APPL-NO: 08/ 453141 [PALM]
DATE FILED: May 30, 1995

PARENT-CASE:
This application is a division, of application Ser. No. 08/293,314, filed Aug. 22, 1994, which is a continuation of application Ser. No. 07/582,945, filed Oct. 12, 1990 now U.S. Pat. No. 5,369,019, which is the national stage of PCT/DK89/00084, filed Apr. 11, 1989 published as WO89/09617, Oct. 19, 1989.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	1995/88	April 12, 1988

INT-CL: [06] A61 K 39/102

US-CL-ISSUED: 424/255.1; 424/192.1, 424/197.11, 530/350, 536/23.1, 435/69.1, 435/320.1
US-CL-CURRENT: 424/255.1; 424/192.1, 424/197.11, 435/320.1, 435/69.1, 530/350, 536/23.1

FIELD-OF-SEARCH: 435/69.1, 435/320.1, 530/350, 424/255.1, 424/197.11, 424/192.1, 536/23.1

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4677070	June 1987	Larrick et al.	435/240

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
036 995	October 1981	EP	
085 469	August 1983	EP	
109 942	May 1984	EP	

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ART-UNIT: 161

PRIMARY-EXAMINER: Housel; James C.

ASSISTANT-EXAMINER: Shaver; Jennifer

ATTY-AGENT-FIRM: Blackstone; William M.

ABSTRACT:

A vaccine for immunizing animals against diseases caused by microorganisms producing an osteolytic toxin is disclosed. The vaccine contains a Pasteurella multocida toxin or derivative thereof that has been rendered non-toxic by genetic and/or biochemical means. The toxin or derivative is encoded by a nucleotide sequence from Pasteurella multocida toxin which is inserted in an expression vector capable of replicating ina suitable host microorganism in which the sequence may be expressed.

6 Claims, 33 Drawing figures

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L4: Entry 23 of 80 File: USPT Feb 16, 1999

US-PAT-NO: 5871750
DOCUMENT-IDENTIFIER: US 5871750 A

TITLE: Leukotoxin vaccine compositions and uses thereof

DATE-ISSUED: February 16, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Potter; Andrew A.	Saskatoon			CA

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
University Saskatchewan	Saskatoon			CA	03

APPL-NO: 08/ 355919 [PALM]
DATE FILED: December 14, 1994

PARENT-CASE:
CROSS REFERENCE TO RELATED APPLICATION This application is a continuation of application Ser. No. 08/015,537 filed on 9 February 1993, now U.S. Pat. No. 5,476,657, which is a continuation of application Ser. No. 07/504,850 filed on 5 April 1990, abandoned, which is a continuation-in-part of application Ser. No. 07/335,018 filed on 7 April 1989, abandoned.

INT-CL: [06] A61 K 39/02, A61 K 39/102, C07 K 14/285

US-CL-ISSUED: 424/255.1; 424/184.1, 424/185.1, 424/236.1, 424/832, 530/350, 435/69.1, 435/69.3, 435/71.1
US-CL-CURRENT: 424/255.1; 424/184.1, 424/185.1, 424/236.1, 424/832, 435/69.1, 435/69.3, 435/71.1, 530/350

FIELD-OF-SEARCH: 424/184.1, 424/185.1, 424/255.1, 424/236.1, 435/69.3, 435/69.1, 435/71.1, 435/83.2, 530/350

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4957739	September 1990	Berget et al.	424/92
☐	5028423	July 1991	Prickett	424/85.8
☐	5055400	October 1991	Lo et al.	435/69.1
☐	5165924	November 1992	Shewen et al.	424/88

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
WO 91/15237	October 1991	WO	

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Lo et al., "Cloning and Expression of the Leukotoxin Gene of Pasteurella haemolytica A1 in Escherichia coli K-12" Infect. Immun. (1985) 50:667-67.
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ART-UNIT: 182

PRIMARY-EXAMINER: Sidberry; Hazel F.

ATTY-AGENT-FIRM: Robins & Associates

ABSTRACT:

New proteins and subunit antigens from P. haemolytica for use in stimulating immunity against respiratory diseases such as pneumonia, including shipping fever pneumonia, are disclosed. The subunit antigens include immunogenic amino acid sequences of P. haemolytica fimbrial protein, P. haemolytica plasmin receptor protein, and P. haemolytica 50K outer membrane protein and P. haemolytica leukotoxin. The antigens can be used in a vaccine composition, either alone or in combination. Also disclosed are methods of vaccination as well as methods of making the subunit antigens employed in the vaccines.

20 Claims, 21 Drawing figures

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L4: Entry 24 of 80 File: USPT Jan 5, 1999

US-PAT-NO: 5855894
DOCUMENT-IDENTIFIER: US 5855894 A

TITLE: Pasteurella haemolytica type A-1 bacterin-toxoid vaccine

DATE-ISSUED: January 5, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Brown; Albert L.	Lincoln	NE		
Dayalu; Krishnaswamy Iyengar	Lincoln	NE		
Kaufman; Thomas James	Lincoln	NE		
Newsham; Rex Steven	Lincoln	NE		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Pfizer Inc.	New York	NY			02

APPL-NO: 08/ 550051 [PALM]
DATE FILED: October 30, 1995

PARENT-CASE:
This application is a continuation of application U.S. Ser. No. 08/307,613 filed on Sep. 20, 1994, now abandoned which is a continuation of PCT/US93/02930 filed Mar. 30, 1993 which is a continuation-in-part of U.S. Ser. No. 07/878,146 filed May 4, 1992 now abandoned which is a continuation-in-part of U.S. Ser. No. 07/869,934 filed Apr. 16, 1992 now abandoned which is a continuation-in-part of U.S. Ser. No. 07/860,377 filed Mar. 30, 1992 now abandoned.

INT-CL: [06] A61 K 39/02, A61 K 39/085, A61 K 39/102, C12 N 7/00

US-CL-ISSUED: 424/236.1; 424/243.1, 424/252.1, 424/184.1, 424/255.1, 424/278.1, 424/823, 435/235.1, 530/350
US-CL-CURRENT: 424/236.1; 424/184.1, 424/243.1, 424/252.1, 424/255.1, 424/278.1, 424/823, 435/235.1, 530/350

FIELD-OF-SEARCH: 424/236.1, 424/243.1, 424/252.1, 424/184.1, 424/255.1, 424/823, 424/278.1, 435/235.1, 530/350

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4559306	December 1985	Kucera	
☐	4626430	December 1986	Kucera	
☐	4681762	July 1987	Oeschger et al.	
☐	4957739	September 1990	Berget et al.	
☐	5084269	January 1992	Kullenberg	
☐	5165924	November 1992	Shewen et al.	
☐	5587166	December 1996	Donachie	
☐	5665363	September 1997	Hansen et al.	

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
WO 8000412	March 1980	WO	
WO 9115237	October 1991	WO	
9319779	October 1993	WO	

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Schnepper et al., 1996, Vet. Medicine, 91(1):72-76.
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Shewen et al., 1985, Am. J. Vet. Res. 46(5):1212-1214.
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Smith The Bovine Practitioneer 1988 #23:31-34.

ART-UNIT: 165

PRIMARY-EXAMINER: Minnifield; Nita

ATTY-AGENT-FIRM: Richardson; Peter C. Ginsburg; Paul H. Koller; Alan L.

ABSTRACT:

This invention relates to the field of Pasteurella haemolytica vaccines. More particularly, the invention relates to a bacterin-toxoid vaccine capable of inducing immunity in bovine species in one dose against Pasteurella haemolytica Type A-1 infection comprising Pasteurella haemolytica derived leukotoxoid, capsular antigen, soluble antigens and cells, methods to make the vaccine and methods of vaccinating bovine animals.

29 Claims, 0 Drawing figures

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L4: Entry 33 of 80 File: USPT Dec 24, 1996

US-PAT-NO: 5587166
DOCUMENT-IDENTIFIER: US 5587166 A
**** See image for Certificate of Correction ****

TITLE: Vaccine against Pasteurella

DATE-ISSUED: December 24, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Donachie; William	East Calder			GB6

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
British Technology Group Limited	London			GB2	03

APPL-NO: 08/ 427692 [PALM]
DATE FILED: April 24, 1995

PARENT-CASE:
This application is a continuation of application Ser. No. 08/106,720 filed Aug. 16, 1993 which is a continuation of application Ser. No. 07/168,960 filed Mar. 16th, 1988, now abandoned.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
GB	8706944	March 24, 1987
GB	8721286	September 10, 1987

INT-CL: [06] A61 K 39/02, A61 K 39/102

US-CL-ISSUED: 424/255.1; 424/234.1, 424/236.1, 424/278.1, 530/350
US-CL-CURRENT: 424/255.1; 424/234.1, 424/236.1, 424/278.1, 530/350

FIELD-OF-SEARCH: 424/234.1, 424/236.1, 424/255.1, 424/278.1, 424/94.1, 530/350

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	2844515	July 1958	Sobotka et al.	195/100
☐	3113078	December 1963	Neely	195/96
☐	4346074	August 1982	Gilmour et al.	424/203.1
☐	4681761	July 1987	Mietzner et al.	424/92

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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
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K.-D. Flossmann et al., J. Basic Microbiol. 25, 559-567 (1985).
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M. R. W. Brown et al., FEMS Microbiology Letters 21, 113-117 (1984).
H. Anwar et al., FEMS Microbiology Letters 29, 225-230 (1985).
Y. Fukuda et al. "Vaccination of Yellowtail against Pseudotuberculosis" Fish Pathology 20 (2/3) 1985, pp. 421-425.

ART-UNIT: 183

PRIMARY-EXAMINER: Nucker; Christine M.

ASSISTANT-EXAMINER: Scheiner; Laurie

ATTY-AGENT-FIRM: Nixon & Vanderhye

ABSTRACT:

A vaccine against Pasteurella comprising a proteinaceous material isolated from Pasteurella grown under iron-restricted conditions, but not from Pasteurella grown under normal conditions in vitro, which reacts in an immunoblotting test against the serum of a convalescent sheep or cow which has recovered from an infection by Pasteurella of the same serotype, together with an adjuvant.

15 Claims, 8 Drawing figures

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L4: Entry 33 of 80 File: USPT Dec 24, 1996

US-PAT-NO: 5587166
DOCUMENT-IDENTIFIER: US 5587166 A
**** See image for Certificate of Correction ****

TITLE: Vaccine against Pasteurella

DATE-ISSUED: December 24, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Donachie; William	East Calder			GB6

US-CL-CURRENT: 424/255.1; 424/234.1, 424/236.1, 424/278.1, 530/350

CLAIMS:

I claim:

1. A vaccine comprising an effective amount of killed whole cells of Pasteurella haemolytica grown under iron-restriction conditions in vitro, together with an adjuvant.

2. The vaccine of claim 1 wherein said killed whole cells are in the form of a bacterin.

3. The vaccine of claim 1 wherein the said Pasteurella haemolytica is of serotype A2.

4. A vaccine comprising an effective mount of killed whole cells of Pasteurella multocida grown under iron-restriction conditions in vitro, other than conditions of attenuation by repeated passaging, together with an adjuvant.

5. The vaccine of claim 4 wherein said killed whole cells are in the form of a bacterin.

6. A vaccine comprising an effective mount of killed whole cells of Pasteurella piscicida grown under iron-restriction conditions in vitro, together with an adjuvant.

7. The vaccine of claim 6 wherein said killed whole cells are in the form of a bacterin.

8. A vaccine against Pasteurella which comprises an effective amount of a proteinaceous material selected from the group consisting of:

(a) isolated protein which is isolatable from Pasteurella hacmolytica grown under iron-restriction conditions in vitro but not from said Pasteurella haemolytica grown under normal conditions in vitro, which reacts in an immunoblotting test against serum of a convalescent animal which has recovered from an infection by said Pasteurella haemolytica of the same serotype; and

(b) killed whole cells of Pasteurella haemolytica grown under iron-restriction conditions in vitro;

said proteinaceous material being formulated together with an adjuvant.

9. A vaccine against Pasteurella which comprises an effective mount of a proteinaceous material selected from the group consisting of:

(a) isolated protein which is isolatable from Pasteurella piscicida grown under iron-restriction conditions in vitro but not from said Pasteurella piscicida grown under normal conditions in vitro, which reacts in an immunoblotting test against serum of a convalescent animal which has recovered from an infection by said Pasteurella piscicida of the same serotype; and

(b) killed whole cells of Pasteurella piscicida grown under iron-restriction conditions in vitro;

said proteinaceous material being formulated together with an adjuvant.

10. A method of prevention or control of pasteurellosis in sheep or cattle, which method comprises the step of administering to sheep or cattle a prophylactically effective amount of a proteinaceous material selected from the group consisting of

(a) isolated protein which is isolatable from Pasteurella haemolytica grown under iron-restriction conditions in vitro but not from said Pasteurella haemolytica grown under normal conditions in vitro, which reacts in an immunoblotting test against serum of a convalescent animal which has recovered from an infection by said Pasteurella haemolytica of the same serotype;

(b) an extract comprising outer membrane proteins of a Pasteurella haemolytica, said extract containing a protein which is isolatable from said Pasteurella haemolytica grown under iron-restriction conditions in vitro but not from said Pasteurella haemolytica grown under normal conditions in vitro, and which reacts in an immunoblotting test against serum of a convalescent animal which has recovered from an infection by said Pasteurella haomolytica of the same serotype; and

(c) killed whole cells of a Pasteurella haemolytica grown under iron-restriction conditions in vitro.

11. The method of claim 10 wherein said proteinaceous material is administered together with an adjuvant.

12. The method of claim 10 wherein said Pasteurella haemolytica is of serotype A2.

13. A method of prevention or control of pasteurellosis in sheep or cattle, which method comprises the step of administering to sheep or cattle a prophylactically effective mount of killed whole cells of Pasteurella haemolytica grown under iron-restriction conditions in vitro.

14. A method of prevention or control of pasteurellosis in cattle, which method comprises the step of administering to cattle a prophylactically effective amount of killed whole cells of Pasteurella multocida grown under iron-restriction conditions in vitro other than conditions of attenuation by repeated passaging.

15. A method of prevention or control of pasteurellosis in fish, which method comprises administering to fish a prophylactically effective mount of a proteinaceous material selected from the group consisting of

(a) an isolated protein isolatable from Pasteurella piscicida grown under iron-restriction conditions in vitro but not from said Pasteurella grown under normal conditions in vitro and which resets in an immunoblotting test against serum of a convalescent fish which has recovered from an infection by said Pasteurella piscicida of the same serotype, and

(b) killed whole cells of Pasteurella piscicida grown under iron-restriction conditions in vitro.

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L4: Entry 43 of 80 File: USPT Aug 9, 1994

US-PAT-NO: 5336491
DOCUMENT-IDENTIFIER: US 5336491 A

TITLE: Methods and compositions for the treatment and diagnosis of shipping fever

DATE-ISSUED: August 9, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Berget; Peter	Pittsburgh	PA		
Engler; Michael	Houston	TX		
Highlander; Sarah	Houston	TX		
Weinstock; George	Houston	TX		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Board of Regents, The University of Texas System	Austin	TX			02

DISCLAIMER DATE: 20070918

APPL-NO: 07/ 899100 [PALM]
DATE FILED: June 15, 1992

PARENT-CASE:
This application is a continuation of application Ser. No. 07/540,261, filed Jun. 18, 1990, now abandoned, which was a division of Ser. No. 07/085,430, filed Jan. 13, 1987, now U.S. Pat. No. 4,957,739, which was a continuing application of U.S. Ser. No. 06/935,806, filed Nov. 28, 1986.

INT-CL: [05] A61K 39/00, A61K 39/02, C12P 21/06, C07K 3/00

US-CL-ISSUED: 424/190.1; 424/255.1, 424/823, 435/69.1, 435/69.3, 435/71.1, 435/71.2, 530/350, 530/387.9, 530/388.4, 530/389.5, 536/23.7
US-CL-CURRENT: 424/190.1; 424/255.1, 424/823, 435/69.1, 435/69.3, 435/71.1, 435/71.2, 530/350, 530/387.9, 530/388.4, 530/389.5, 536/23.7

FIELD-OF-SEARCH: 424/88, 424/92, 435/69.1, 435/71.2, 435/172.3, 536/27, 530/350

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5055400	October 1991	Lo et al.	435/69.1
☐	5165924	November 1992	Shewen et al.	424/88

OTHER PUBLICATIONS

Shewen et al Am J. Vet Res 46;1212-1214, 1985.
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Baluyat et al Am J. Vet Res 42:1920-1926, 1981.
Lo et al Inf & Imm Dec. 3 1985 pp. 667-671 Cloning & Expression of the leukotoxin Gene of Pasteurella haemolytice Al in E. col K-12.
Shewen, Patricia E., "Immunity to Pasteurella haemolytice Serotype 1," North American Symposium on Bovine Respiratory Disease, Amarillo, Tex., Sep. 1983, pp. 480-481. Abstract only.

ART-UNIT: 183

PRIMARY-EXAMINER: Nucker; Christine M.

ASSISTANT-EXAMINER: Sidberry; H. F.

ATTY-AGENT-FIRM: Arnold, White & Durkee

ABSTRACT:

Novel compositions are disclosed for use in the treatment or diagnosis of bovine pasteurellosis, commonly referred to as Shipping Fever. Cell-free Pasteurella haemolytica supernatants are employed to provide individual antigen compositions, identified through reaction with sera from naturally-infected or convalescent cattle. In particular, at least seven individual P. haemolytica antigen groups were recognized in cell-free culture supernatants. Purified P. haemolytica supernatant, formulated in a suitable pharmaceutical vaccine composition is shown to elicit a specific immune response, in both cows and rabbits, directed against the individual immunoreactive P. haemolytica polypeptides identified. Also disclosed are novel recombinant cells, plasmids and bacteriophage which include transcriptionally active P. haemolytica antigen genes. Recombinant clones are similarly selected to be reactive with naturally-infected antisera. Examples, and further disclosure, are also provided which demonstrate the utility of a presently disclosed antibody and antigen compositions in immuno-detection of both antigens and antibodies in various biological samples.

22 Claims, 18 Drawing figures

WEST

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L4: Entry 47 of 80 File: USPT May 11, 1993

US-PAT-NO: 5210035
DOCUMENT-IDENTIFIER: US 5210035 A

TITLE: Non-reventing live vaccines

DATE-ISSUED: May 11, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Stocker; Bruce A. D.	Portola Valley	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Board of Trustees of Leland Stanford Jr. University	Palo Alto	CA			02

DISCLAIMER DATE: 20050405

APPL-NO: 07/ 745876 [PALM]
DATE FILED: August 16, 1991

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATIONS This application is a continuation of U.S. Ser. No. 170,727, filed Mar. 21, 1988, now U.S. Pat. No. 5,077,044, which is a continuation-in-part of U.S. Ser. No. 798,052, filed Nov. 14, 1985, now U.S. Pat. No. 4,837,151, which is a continuation-in-part of U.S. Ser. No. 675,381, filed Nov. 27, 1984, now U.S. Pat. No. 4,735,801, which is a continuation-in-part of U.S. Ser. No. 415,291, filed Sep. 7, 1982, now U.S. Pat. No. 4,550,081, issued Oct. 29, 1985, which is a continuation-in-part of U.S. Ser. No. 151,002, filed May 19, 1980, now abandoned, which disclosures are incorporated herein by references.

INT-CL: [05] C12N 15/00

US-CL-ISSUED: 435/172.3; 424/87, 424/92, 435/172.1, 435/245, 435/879, 435/252.3, 935/1, 935/9, 935/31, 935/58, 935/65, 935/72
US-CL-CURRENT: 424/235.1; 424/234.1, 424/249.1, 424/253.1, 424/255.1, 424/256.1, 424/258.1, 435/245, 435/252.3, 435/441 , 435/476, 435/879

FIELD-OF-SEARCH: 435/172.3, 435/253, 435/243, 435/245, 435/252.3, 435/252.8, 424/87, 424/92

ART-UNIT: 183

PRIMARY-EXAMINER: Nucker; Christine M.

ASSISTANT-EXAMINER: Stucker; Jeffrey

ATTY-AGENT-FIRM: Flehr,Hohbach, Test, Albritton & Herbert

ABSTRACT:

Live vaccines are provided and methods for preparing the live vaccines for protection of a host from a pathogenic microorganism. The vaccines are prepared by introducing at least one modification in a gene involved in at least one, normally at least two, biosynthetic pathways involving the production of products which are unlikely to be found in the disease susceptible host. The modification results in a gene change which cannot be repaired by a single step, e.g. polynucleotide deletions and inversions. Where the aro gene suffers such a change, the resultant auxotrophic mutants require aromatic amino acids, p-aminobenzoic acid and 2,3-dihydroxybenzoic acid or a highly concentrated source of absorabable iron. The auxotrophic mutations have substantially reduced or nonexistent virulence while retaining the desired immunogenicity to initiate the immunogenic response. Various techniques can be employed for providing the desired change.

21 Claims, 0 Drawing figures

WEST

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L4: Entry 59 of 80 File: USPT Mar 19, 1985

US-PAT-NO: 4506017
DOCUMENT-IDENTIFIER: US 4506017 A

TITLE: Modified Pasteurella haemolytica bacteria

DATE-ISSUED: March 19, 1985

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kucera; Carrell J.	Lincoln	NE		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Norden Laboratories, Inc.	Lincoln	NE			02

APPL-NO: 06/ 459274 [PALM]
DATE FILED: January 19, 1983

PARENT-CASE:
This is a division of application Ser. No. 255,145 filed Apr. 17, 1981, now U.S. Pat. No. 4,388,299.

INT-CL: [03] C12N 1/20, C12N 15/00

US-CL-ISSUED: 435/253; 435/172.1, 435/245, 435/822, 424/92, 424/93
US-CL-CURRENT: 435/252.1; 424/255.1, 435/245, 435/822

FIELD-OF-SEARCH: 435/253, 435/172, 424/92, 424/93

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	3501770	January 1970	Gale et al.	
☐	3526696	September 1970	Gale et al.	
☐	3634587	January 1972	Ament et al.	
☐	3855408	December 1974	Maheswaran	
☐	4167560	September 1979	Wohler	
☐	4169886	October 1979	Hertman	
☐	4171354	October 1979	Smith	

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
857014	March 1976	BE	
878430	December 1979	BE	
1030873	February 1974	CA	
2816942	October 1978	DE	
7304320	October 1973	NL	
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OTHER PUBLICATIONS

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Literature Search, Apr. 13, 1978.
Literature Search, Jan. 25, 1980.

ART-UNIT: 132

PRIMARY-EXAMINER: Jones; Raymond

ASSISTANT-EXAMINER: Minnick; Marianne S.

ATTY-AGENT-FIRM: Lentz; Edward T. Williams; Janice E. Lourie; Alan D.

ABSTRACT:

The chemical modification of virulent Pasteurella multocida and Pasteurella haemolytica strains and preparation of live bacteria vaccines from the modified organisms for immunization of bovine, porcine and ovine animal species are disclosed.

1 Claims, 0 Drawing figures

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Search Results - Record(s) 71 through 80 of 80 returned.

☐ 71. Document ID: US 3855408 A

L4: Entry 71 of 80 File: USPT Dec 17, 1974

US-PAT-NO: 3855408
DOCUMENT-IDENTIFIER: US 3855408 A
**** See image for Certificate of Correction ****

TITLE: POULTRY VACCINE

DATE-ISSUED: December 17, 1974

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Maheswaran; S. K.	Minneapolis	MN		

US-CL-CURRENT: 424/255.1; 424/826

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Image

☐ 72. Document ID: US 3853990 A

L4: Entry 72 of 80 File: USPT Dec 10, 1974

US-PAT-NO: 3853990
DOCUMENT-IDENTIFIER: US 3853990 A
**** See image for Certificate of Correction ****

TITLE: INFECTIOUS KERATING BACTERIN AND ANTISERUM AND METHOD OF PREPARING SAME

DATE-ISSUED: December 10, 1974

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Madigan; Edward J.	Denver	CO	80212	
Ruszczycky; Mark M.	Denver	CO	80212	

US-CL-CURRENT: 424/163.1; 424/164.1, 424/166.1, 424/203.1, 424/245.1, 424/255.1, 424/823

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Image

☐ 73. Document ID: US 3798320 A

L4: Entry 73 of 80 File: USPT Mar 19, 1974

US-PAT-NO: 3798320
DOCUMENT-IDENTIFIER: US 3798320 A
**** See image for Certificate of Correction ****

TITLE: TEXT NOT AVAILABLE

DATE-ISSUED: March 19, 1974

US-CL-CURRENT: 424/239.1; 424/236.1, 424/252.1, 424/255.1, 424/258.1, 435/170, 435/261, 435/803, 435/822, 435/842, 435/879

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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☐ 74. Document ID: US 3419660 A

L4: Entry 74 of 80 File: USPT Dec 31, 1968

US-PAT-NO: 3419660
DOCUMENT-IDENTIFIER: US 3419660 A

TITLE: TEXT NOT AVAILABLE

DATE-ISSUED: December 31, 1968

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Name not available				

US-CL-CURRENT: 424/203.1; 424/255.1, 424/823, 514/152, 514/179, 514/192, 514/37, 514/39

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 75. Document ID: US 3328252 A

L4: Entry 75 of 80 File: USPT Jun 27, 1967

US-PAT-NO: 3328252
DOCUMENT-IDENTIFIER: US 3328252 A

TITLE: TEXT NOT AVAILABLE

DATE-ISSUED: June 27, 1967

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Name not available				

US-CL-CURRENT: 424/255.1; 424/258.1, 424/280.1, 424/826COFCyes

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 76. Document ID: US 3193460 A

L4: Entry 76 of 80 File: USPT Jul 6, 1965

US-PAT-NO: 3193460
DOCUMENT-IDENTIFIER: US 3193460 A

TITLE: TEXT NOT AVAILABLE

DATE-ISSUED: July 6, 1965

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Name not available				

US-CL-CURRENT: 435/252.1; 424/234.1, 424/243.1, 424/244.1, 424/252.1, 424/254.1, 424/255.1, 424/256.1, 435/253.4, 435/260, 435/298.2, 435/822

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 77. Document ID: US 3139382 A

L4: Entry 77 of 80 File: USPT Jun 30, 1964

US-PAT-NO: 3139382
DOCUMENT-IDENTIFIER: US 3139382 A

TITLE: TEXT NOT AVAILABLE

DATE-ISSUED: June 30, 1964

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Name not available				

US-CL-CURRENT: 424/234.1; 424/243.1, 424/244.1, 424/245.1, 424/255.1, 424/257.1, 424/258.1, 435/243, 435/822, 435/828, 435/843, 435/848, 435/879, 435/882, 435/885COFCyes

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
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☐ 78. Document ID: US 3137629 A

L4: Entry 78 of 80 File: USPT Jun 16, 1964

US-PAT-NO: 3137629
DOCUMENT-IDENTIFIER: US 3137629 A

TITLE: TEXT NOT AVAILABLE

DATE-ISSUED: June 16, 1964

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Name not available				

US-CL-CURRENT: 424/255.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 79. Document ID: US 3127318 A

L4: Entry 79 of 80 File: USPT Mar 31, 1964

US-PAT-NO: 3127318
DOCUMENT-IDENTIFIER: US 3127318 A

TITLE: TEXT NOT AVAILABLE

DATE-ISSUED: March 31, 1964

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Name not available				

US-CL-CURRENT: 424/234.1; 424/157.1, 424/184.1, 424/243.1, 424/244.1, 424/255.1, 424/257.1, 424/258.1, 514/54, 514/885

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 80. Document ID: US 2787576 A

L4: Entry 80 of 80 File: USPT Apr 2, 1957

US-PAT-NO: 2787576
DOCUMENT-IDENTIFIER: US 2787576 A

TITLE: TEXT NOT AVAILABLE

DATE-ISSUED: April 2, 1957

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Name not available				

US-CL-CURRENT: 435/245; 424/252.1, 424/255.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
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Terms	Documents
((424/255.1)!.CCLS.)	80

Display Format: CIT | Change Format

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L2: Entry 1 of 2 File: USPT Dec 17, 2002

US-PAT-NO: 6495145
DOCUMENT-IDENTIFIER: US 6495145 B2

TITLE: LktA deletion mutant of P. haemolytica 09/982232

DATE-ISSUED: December 17, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Briggs; Robert E.	Boone	IA		
Tatum; Fred M.	Ames	IA		

US-CL-CURRENT: 424/255.1; 424/234.1, 424/93.4, 426/2, 426/89, 435/455, 435/69.1

CLAIMS:

We claim:

1. A method of inducing immunity to pneumonic pasteurellosis in ruminants, comprising the step of: administering a P. haemolytica bacterium to a ruminant, wherein the P. haemolytica bacterium (a) expresses no biologically active leukotoxin, (b) expresses a form of leukotoxin molecule which is a deletion mutant of about 66 kDa which lacks amino acids 34 to 378 and which induces antibodies which specifically bind to and neutralize biologically active leukotoxin; and (c) contains no foreign DNA, whereby immunity is induced.

2. The method of claim 1 wherein the step of administering is via the oral route.

3. The method of claim 1 wherein the bacterium is top-dressed on the feed of the ruminant.

4. The method of claim 1 wherein the step of administering comprises injecting the bacterium subcutaneously.

5. The method of claim 1 wherein the step of administering comprises injecting the bacterium intradermally.

6. The method of claim 1 wherein the step of administering comprises injecting the bacterium intramuscularly.

7. The method of claim 1 wherein the step of administering is via the nose.

8. A feed for ruminants which comprises a P. haemolytica bacterium to a ruminant, wherein the P. haemolytica bacterium (a) expresses no biologically active leukotoxin, (b) expresses a form of leukotoxin molecule which is a deletion mutant of about 66 kDa which lacks amino acids 34 to 378 and which induces antibodies which specifically bind to and neutralize biologically active leukotoxin; and (c) contains no foreign DNA.

9. A vaccine for reducing morbidity in ruminants, comprising: a P. haemolytica bacterium (a) expresses no biologically active leukotoxin, (b) expresses a form of leukotoxin molecule which is a deletion mutant of about 66 kDa which lacks

amino acids 34 to 378 and which induces antibodies which specifically bind to and neutralize biologically active leukotoxin; and (c) contains no foreign DNA.

WEST

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L1: Entry 1 of 1 File: USPT Dec 17, 2002

US-PAT-NO: 6495145
DOCUMENT-IDENTIFIER: US 6495145 B2

TITLE: LktA deletion mutant of P. haemolytica

DATE-ISSUED: December 17, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Briggs; Robert E.	Boone	IA		
Tatum; Fred M.	Ames	IA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
The United States of America as represented by the Secretary of Agriculture	Washington	DC			06
Biotechnology Research and Development Corporation	Peoria	IL			02

APPL-NO: 09/ 982232 [PALM]
DATE FILED: October 19, 2001

PARENT-CASE:
This application is a division of co-pending Ser. No. 09/160,340 filed Sep. 25, 1998, now U.S. Pat. No. 6,331,303 which claims the benefit of co-pending provisional application Ser. No. 60/060,060, filed Sep. 25, 1997. Both applications are incorporated herein by reference.

INT-CL: [07] A61 K 39/102

US-CL-ISSUED: 424/255.1; 424/234.1, 424/93.4, 435/69.1, 435/455, 426/2, 426/89
US-CL-CURRENT: 424/255.1; 424/234.1, 424/93.4, 426/2, 426/89, 435/455, 435/69.1

FIELD-OF-SEARCH: 424/255.1, 424/234.1, 424/172.1, 424/252.3, 424/69.1, 424/93.4, 435/69.1, 435/320.1, 435/455, 435/243, 435/252.3, 536/23.7, 426/2, 426/89

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5422110	June 1995	Potter et al.	
☐	5733780	March 1998	Briggs et al.	

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
WO 97 16531	May 1997	WO	
WO 97/41823	November 1997	WO	

OTHER PUBLICATIONS

George L. Murphy et al., "Hemolytic Activity of the Pasteurella haemolyticaLeukotoxin" Infection and Immunity, vol. 63, Aug. 1995, pp. 3209-3212.
Natalie D. Federova & Sarah K. Highlander "Generation of Targeted Nonpolar Gene Insertions and Operon Fusions in Pasteurella haemolytica and Creation of a Strain that Produces and Secretes Inactive Leukotoxin" Infection and Immunity, Jul. 1997, pp. 2593-2598.
Fred M. Tatum et al. "Construction of an isogenic leukotoxin deletion mutation of Pasteurella haemolytica serotype 1: characterization and virulence" Microbial Pathagenesis 1998; 24:37-46.
Robert E. Briggs et al., "Development and testing of a unique strain of Pasteurella haemolytica fo ruse in studies on colonization of the respiratory tract of cattle" AJVR, vol. 59, No. 4, Apr. 1998.
Robert E. Briggs et al. , "Rapid spread of a unique strain of Pasteurella haemolytica serotype 1 among transported calves" AJVR, vol. 59, No. 4, Apr. 1998.
Glynn H. Frank et al., "Colonization of the tonsils and nasopharynx of calves by a rifampicin-resistant Pasteurella haemolytica and its inhibition by vaccination" Am J Vet Res., vol. 56, No. 7, Jul. 1995.
G.H. Frank et al., "Serotype-specific inhibition of colonization of the tonsils and nasopharynx of calves after Pasteurella haemolytica serotype A1 after vaccination with the organism" Am J Vet Res, vol. 55, No. 8, Aug. 1994.
G.H. Frank & R.E. Briggs, "Colonization of the tonsils of calves with Pasteurella haemolytica serotype 1", AM J Vet Res, vol. 53, No. 4, Apr. 1992.
Glynn H. Frank, "Infection of the middle nasal meatus of calves with Pasteurella haemolytica serotype 1" Am J Vet Res, vol. 50, No. 8, Aug. 1989.
David C. Straus et al., "In Vivo Production of Neuraminidase by Pasteurella haemolytica in Market Stressed Cattle After Natural Infection", Current Microbiology, vol. 37 (1998), pp. I 240-244.
Glynn H. Frank et al, "Respiratory tract disease and mucosal colonization by Pasteurella haemolyticain transported cattle", AJVR, vol. 57, No. 9, Sep. 1996, pp. 1317-1320.
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Hamilton et al., "New Method for Generating Deletions and Gene Replacements in Escherichi coli", Journal of Bacteriology, Sep. 1989, vol. 171, No. 9, pp. 4617-4622.

Cruz W.T., et al., "Deletion analysis resolves cell-binding and lytic domains of the Pasteurella luktoxin" Molecular Microbioloty, vol. 4, No. 11, Nov. 1990, pp. 1933-1939.
Petras S.F. et al., "Antigenic and virulence properties of Pasteurella haemolytica leukotoxin mutants", Infection and Immunity, vol. 63, No. 5, Mar. 1995, pp. 1033-1039.

ART-UNIT: 1645

PRIMARY-EXAMINER: Wortman; Donna C.

ASSISTANT-EXAMINER: Zeman; Robert A.

ATTY-AGENT-FIRM: Banner & Witcoff, Ltd.

ABSTRACT:

Mutants of P. haemolytica provide excellent safety and efficacy when used as vaccines in ruminants, for example cattle, sheep, and goats, subject to pneumonic pasteurellosis. They can be administered by a variety of routes. Especially preferred is the use in animal feeds. The mutants are not reverting and contain no foreign DNA and no introduced antibiotic resistance genes.

9 Claims, 6 Drawing figures

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L2: Entry 2 of 2 File: USPT Dec 18, 2001

US-PAT-NO: 6331303
DOCUMENT-IDENTIFIER: US 6331303 B1
**** See image for Certificate of Correction ****

09/160340 U

TITLE: LKTA deletion mutant of P. haemolytica

DATE-ISSUED: December 18, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Briggs; Robert E.	Boone	IA		
Tatum; Fred M.	Ames	IA		

US-CL-CURRENT: 424/255.1; 424/234.1, 435/252.3, 435/471, 435/69.1

CLAIMS:

We claim:

1. An isolated and purified P. haemolytica bacterium which:

a) expresses no biologically active leukotoxin,

b) expresses a form of leukotoxin molecule which is a deletion mutant of about 66 kDa which lacks amino acids 34 to 378 and which induces antibodies which specifically bind to and neutralize biologically active leukotoxin; and

c) contains no foreign DNA.

2. The P. haemolytica bacterium of claim 1 wherein the bacterium is lktC.sup.30 .

3. P. haemolytica bacterium of claim 1 wherein the leukotoxin operon comprises no antibiotic resistance genes.

WEST

End of Result Set

☐ Generate Collection Print

L5: Entry 1 of 1 File: PGPB Jul 4, 2002

PGPUB-DOCUMENT-NUMBER: 20020086413
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020086413 A1

09/981897 09/981987

TITLE: LktA deletion mutant of P. haemolytica

PUBLICATION-DATE: July 4, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Briggs, Robert E.	Boone	IA	US	
Tatum, Fred M.	Ames	IA	US	

US-CL-CURRENT: 435/252.3

CLAIMS:

We claim:

1. A temperature sensitive plasmid which replicates at 30.degree. C. but not at 40.degree. C. in P. haemolytica and which has an origin of replication of the same incompatibility group as the plasmid which has been deposited at the ATCC with Accession No. 98895.

2. The temperature sensitive plasmid of claim 1 which is the plasmid which has been deposited at the ATCC with Accession No. 98895.